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10/787,344	02/26/2004	Jeffrey W. Bremyer	3181	3975

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EXAMINER
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DEL SOLE, JOSEPH S

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/787,344	<b>Applicant(s)</b> BREMYER, JEFFREY W.	
	<b>Examiner</b> Joseph S. Del Sole	<b>Art Unit</b> 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 July 2006 and 28 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)            | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because a) the lines, numbers and letters are not uniform, clean and well defined (of a generally poor quality) in each of the 11 figures (37 CFR 1.84(l)). Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Objections***

2. Claims 1, 8 and 15 are objected to because of the following informalities: a) each of the independent claims, 1, 8 and 15, have inappropriate preambles and should be rewritten to begin --A device-- instead of "In combination", which is particularly necessary because each of the dependent claims being "The device". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5, 8-12 and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipate by Teutsch et al (5,069,612).

Teutsch et al teach a device with a head assembly for producing a two layer material flow (Fig 1, #s 14 and 16), a downstream melt distributor housing attached to said head assembly for presenting a combined material flow of said first and second layers coated with an exterior layer of material (Fig 1, between #s 18 and 16), said melt distributor housing comprising: a first upstream housing portion (Fig 1, #s 14 and 16); a first channel (Fig 1, within #14) in said first upstream housing portion adapted for a downstream flow of the first layer of material therethrough; a second channel (Fig 1, within #16) in said first upstream housing portion adapted for a downstream flow of the second layer of material therethrough; said first and second channels in said first upstream housing portion configured for melding said first and second material flows at a downstream juncture (Fig 1, between # 16 and 18) in said first housing portion, whereby to present a combined first and second material flow; a second downstream housing portion (Fig 1, #20); channel means in said second housing portion adapted for a downstream flow of said combined first and second material flow from said juncture (Fig 1); an inlet in said second housing portion for flow of a third material therethrough (Fig 1, within #20); sinuous channel means (Fig 2) in at least said second downstream housing portion and in communication with said inlet for a flow of said third material from said inlet and about said first and second combined material flow, said sinuous channel means having a downstream outlet in communication with said channel means

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for a melding of the third material about said combined first and second material flow through said channel means (Fig 2), said melding resulting in a three layer material flow, said three layer material flow comprising the first material as an interior layer, the second material as an intermediate layer and the third material as said exterior Layer (Fig 1);

2) the sinuous channel means being a sinuous path having a first end in communication with said inlet, said sinuous path having a second end adjacent said channel means having said combined first and second material flow therein; an outlet at said second end of said sinuous path and in communication with said channel means, said outlet depositing said third material into said channel means (Fig 2);

3) the said second end of said sinuous path presents an annular scroll-like path about said channel means, said outlet presenting an annular outlet at said second end of said path in communication with said channel means for discharging the third material flow into an annular flow about the combined material flow in said channel means (Fig 2);

4) the sinuous path comprises first and second paths having a common first end point in communication with said inlet, said paths diverging in opposed directions relative to said inlet with each of said paths presenting an outlet for discharge of the third material into said channel means at different points about the combined flow (Fig 2);

5) an annular scroll-like path in communication with said respective outlets of said first and second paths, said scroll-like path presenting an annular outlet for annular discharge of the third material flow about the combined material flow in said channel means (Fig 2);

8) a device having an upstream head assembly producing a two layer material flow having a first interior layer and a second intermediate layer, a downstream melt distributor adapted for attachment to said head assembly for coating said two layer material flow with an exterior layer of material, said melt distributor having a housing; a first inlet in said housing adapted for flow of the first layer of material from the upstream head assembly therethrough; a second inlet in said housing adapted for flow of the second intermediate layer of material from the upstream-head assembly; means in said housing for melding said first and second material flows at a downstream juncture therein, whereby to present a combined first and second material flow; channel means in said housing adapted for passage of said combined material flow therethrough; a third inlet in said second housing for flow of a third material therethrough; sinuous channel means in communication with said third inlet for a flow of said third material from said third inlet and about said combined material flow in said channel means, said sinuous channel means having a downstream outlet for a melding of the third material about said combined material flow in said channel means, said melding resulting in a three layer material flow through said housing (Figs 1 and 2, as described for claims 1-5);

9) the sinuous channel means comprises: a sinuous channel path in said housing, said sinuous channel path presenting a plurality of outlets about said channel means, a discharge of the third material from said outlets of said sinuous channel path discharging the third material from said outlets and about the combined material flow (Figs 1 and 2);

10) an annular scroll-like path in communication with said plurality of outlets of said sinuous channel path, said scroll-like path having an outlet for discharging the material flow of the third material about the combined material flow (Figs 1 and 2);

11) said sinuous channel paths comprises first and second paths having a starting point in communication with said third inlet, said paths diverging in opposed directions with each of said paths presenting an outlet for discharge of the third material at different points about the combined flow (Figs 1 and 2);

12) an annular scroll-like path in communication with said outlets of said first and second paths, said scroll-like path having an annular outlet for discharging the third material flow about the combined material flow (Figs 1 and 2);

15) a head assembly for providing an upstream material flow, a downstream melt distributor attached to said head assembly for coating said material flow with a layer of a second material, said melt distributor comprising: a housing; channel means in said housing adapted for passage of the upstream material flow therethrough; means in said housing for initial input of a second material therein; sinuous channel means in said housing and in communication with said input means for directing a flow of the second

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material about said material flow in said channel means, said sinuous channel means having a plurality of downstream outlets about the material flow for a melding of the second material with the material flow (Figs 1 and 2, as described for claims 1-5, the Examiner notes that the absence of a third concordant with the second material of claims 1-5 does not differentiate);

16) the sinuous channel means comprises a sinuous path in said housing, said second path winding about said material flow and presenting a plurality of downstream outlets surrounding the material flow (Figs 1 and 2);

17) the sinuous channel means includes an annular scroll-like path in communication with said downstream outlets of said sinuous path, said scroll-like path presenting an annular outlet for discharging the material flow of the material about the material flow (Figs 1 and 2);

18) said sinuous path comprises at least first and second paths having a common starting point in communication with said input means, each said path having an outlet at different points about the material flow (Figs 1 and 2);

19) annular scroll-like path in communication with each said outlet of said at least first and second paths, said scroll-like path having a generally annular outlet for discharging the second material about the material flow (Figs 1 and 2).

5. Claims 15-20 are rejected under 35 U.S.C. 102(b) as being anticipate by Metzger (5,672,303).

Metzger teaches a head assembly (Fig 1, #16) for providing an upstream material flow, a downstream melt distributor (Fig 1, #s 36 and 22) attached to said head



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assembly for coating said material flow with a layer of a second material, said melt distributor comprising: a housing (Fig 1, #16); channel means (Fig 1, #17) in said housing adapted for passage of the upstream material flow therethrough; means in said housing for initial input of a second material therein (Fig 1, #31); sinuous channel means (Fig 2, #s 8 and 9) in said housing and in communication with said input means for directing a flow of the second material about said material flow in said channel means, said sinuous channel means having a plurality of downstream outlets about the material flow for a melding of the second material with the material flow (Figs 1 and 2);

16) the sinuous channel means comprises a sinuous path in said housing, said second path winding about said material flow and presenting a plurality of downstream outlets surrounding the material flow (Figs 1 and 2);

17) the sinuous channel means includes an annular scroll-like path in communication with said downstream outlets of said sinuous path, said scroll-like path presenting an annular outlet for discharging the material flow of the material about the material flow (Figs 1 and 2);

18) said sinuous path comprises at least first and second paths having a common starting point in communication with said input means, each said path having an outlet at different points about the material flow (Figs 1 and 2);

19) annular scroll-like path in communication with each said outlet of said at least first and second paths, said scroll-like path having a generally annular outlet for discharging the second material about the material flow (Figs 1 and 2);

20) each said first and second paths split into further paths, said further paths each having downstream outlets for discharge of the second material at a plurality of points about the material flow (Figs 1 and 2).

6. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Rodriguez et al (6,343,919).

Rodriguez et al teach a device with a head assembly (Fig 6, #10) for producing a two layer material flow, a downstream melt distributor housing (Fig 6, #42) attached to said head assembly for presenting a combined material flow of said first and second layers coated with an exterior layer of material, said melt distributor housing comprising: a first upstream housing portion (Fig 6, #10); a first channel in said first upstream housing portion adapted for a downstream flow of the first layer of material therethrough (Fig 6); a second channel in said first upstream housing portion adapted for a downstream flow of the second layer of material therethrough (Fig 6); said first and second channels in said first upstream housing portion configured for melding said first and second material flows at a downstream juncture in said first housing portion, whereby to present a combined first and second material flow (Fig 6); a second downstream housing portion (Fig 6, upper #10); channel means in said second housing portion adapted for a downstream flow of said combined first and second material flow from said juncture; an inlet in said second housing portion for flow of a third material therethrough (Fig 6, upper #32); sinuous channel means in at least said second downstream housing portion and in communication with said inlet for a flow of said third material from said inlet and about said first and second combined

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material flow, said sinuous channel means having a downstream outlet in communication with said channel means for a melding of the third material about said combined first and second material flow through said channel means, said melding resulting in a three layer material flow, said three layer material flow comprising the first material as an interior layer, the second material as an intermediate layer and the third material as said exterior layer (Fig 4);

2) the sinuous channel means being a sinuous path having a first end in communication with said inlet, said sinuous path having a second end adjacent said channel means having said combined first and second material flow therein; an outlet at said second end of said sinuous path and in communication with said channel means, said outlet depositing said third material into said channel means (Fig 4);

3) the said second end of said sinuous path presents an annular scroll-like path about said channel means, said outlet presenting an annular outlet at said second end of said path in communication with said channel means for discharging the third material flow into an annular flow about the combined material flow in said channel means (Fig 4);

4) the sinuous path comprises first and second paths having a common first end point in communication with said inlet, said paths diverging in opposed directions relative to said inlet with each of said paths presenting an outlet for discharge of the third material into said channel means at different points about the combined flow (Fig 4);

5) an annular scroll-like path in communication with said respective outlets of said first and second paths, said scroll-like path presenting an annular outlet for annular discharge of the third material flow about the combined material flow in said channel means (Fig 4);

6) the first and second paths split downstream into further paths, said further paths each having an outlet for discharge of the third material at different points into said channel means containing the combined material flow (Fig 4);

7) the scroll-like path in communication with said respective outlets of said further paths, the third material being discharged from each respective outlet and into an annular outlet of said scroll-like path for an annular discharge of the third material about the combined material flow in said channel means (Fig 4);

8) a device having an upstream head assembly producing a two layer material flow having a first interior layer and a second intermediate layer, a downstream melt distributor adapted for attachment to said head assembly for coating said two layer material flow with an exterior layer of material, said melt distributor having a housing; a first inlet in said housing adapted for flow of the first layer of material from the upstream head assembly therethrough; a second inlet in said housing adapted for flow of the second intermediate layer of material from the upstream-head assembly; means in said housing for melding said first and second material flows at a downstream juncture therein, whereby to present a combined first and second material flow; channel means in said housing adapted for passage of said combined material flow therethrough; a third inlet in said second housing for flow of a third material therethrough; sinuous

channel means in communication with said third inlet for a flow of said third material from said third inlet and about said combined material flow in said channel means, said sinuous channel means having a downstream outlet for a melding of the third material about said combined material flow in said channel means, said melding resulting in a three layer material flow through said housing (Figs 4 and 6, as described for claims 1-5);

9) the sinuous channel means comprises: a sinuous channel path in said housing, said sinuous channel path presenting a plurality of outlets about said channel means, a discharge of the third material from said outlets of said sinuous channel path discharging the third material from said outlets and about the combined material flow (Fig 4);

10) an annular scroll-like path in communication with said plurality of outlets of said sinuous channel path, said scroll-like path having an outlet for discharging the material flow of the third material about the combined material flow (Fig 4);

11) said sinuous channel paths comprises first and second paths having a starting point in communication with said third inlet, said paths diverging in opposed directions with each of said paths presenting an outlet for discharge of the third material at different points about the combined flow (Fig 4);

12) an annular scroll-like path in communication with said outlets of said first and second paths, said scroll-like path having an annular outlet for discharging the third material flow about the combined material flow (Fig 4);

13) each said first and second paths split into further paths, said further paths each having an outlet for discharge of the third material at different points about the combined material flow (Fig 4);

14) a scroll-like path in communication with said respective outlets of said further paths, the third material being discharged from each respective outlet and into said scroll-like path, said scroll-like path having an annular outlet for discharge of the third material about the combined material flow (Fig 4);

15) a head assembly for providing an upstream material flow, a downstream melt distributor attached to said head assembly for coating said material flow with a layer of a second material, said melt distributor comprising: a housing; channel means in said housing adapted for passage of the upstream material flow therethrough; means in said housing for initial input of a second material therein; sinuous channel means in said housing and in communication with said input means for directing a flow of the second material about said material flow in said channel means, said sinuous channel means having a plurality of downstream outlets about the material flow for a melding of the second material with the material flow (Figs 4 and 6, as described for claims 1-5);

16) the sinuous channel means comprises a sinuous path in said housing, said second path winding about said material flow and presenting a plurality of downstream outlets surrounding the material flow (Fig 4);

17) the sinuous channel means includes an annular scroll-like path in communication with said downstream outlets of said sinuous path, said scroll-like path

presenting an annular outlet for discharging the material flow of the material about the material flow (Fig 4);

18) said sinuous path comprises at least first and second paths having a common starting point in communication with said input means, each said path having an outlet at different points about the material flow (Fig 4);

19) annular scroll-like path in communication with each said outlet of said at least first and second paths, said scroll-like path having a generally annular outlet for discharging the second material about the material flow (Fig 4);

20) each said first and second paths split into further paths, said further paths each having downstream outlets for discharge of the second material at a plurality of points about the material flow (Fig 4).

The Examiner notes that the lower #32 can be divided into #s 32a and 32b so that a first and second material can be melded as claimed (col 3, line 64 - col 4, line 6).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 6-7, 13-14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teutsch et al (5,069,612) in view of Metzger (5,672,303).

Teutsch et al teach the apparatus as discussed above.

Teutsch et al fail to teach the first and second paths split downstream into further paths, said further paths each having an outlet for discharge of the outermost material at different points into said channel means containing the combined (or not combined) inner material flow.

Metzger teaches each said first and second paths split into further paths (Fig 2), said further paths each having downstream outlets for discharge of the outer material at a plurality of points about the material flow (Figs 1 and 2) for the purpose of enabling an even distribution over the entire circumference (col 4, lines 3-4).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Teutsch et al with the first and second paths being split further into further paths as taught by Metzger because such splits further and better enable even distribution.

#### ***Response to Arguments***

10. Applicant's arguments filed 8/28/06 have been fully considered but they are not persuasive.



Regarding the drawing, the Examiner has requested a Notice of Draftsperson's Review. Questions regarding the drawings should be directed there.

The Applicant argues that the claimed invention is directed to devices which results in three-layer flow and that the cited references show only a two-layer flow.

The Examiner disagrees. The argument is moot with regard to independent claim 15 which sets forth only two-layers itself. Also, the references do teach three-layer flow. The Examiner notes that if two of the distinct layers come from the same initial source they may still read on the three-layer flow as claimed. Deutsch, column 4, lines 15-30 discusses four extruders for four layers. Metzger shows two layers on a preform, which reads on claims 15-20. Rodriguez shows in Figure 6 that there are two layers of one material from the lower #10 and two layers of a second material from the upper #10, for four total layers.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

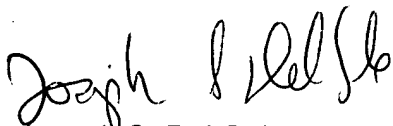
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on M-F 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Joseph S. Del Sole  
9/6/06